QUERCUS XRIPARIA LAUGHLIN
KANSAS CITY OAK

Hibrida nova[1]

Quercus rubra L. X shumardii schneckii Sarg.

Erythrobalanus Section
Coccineae Series

Kendall Laughlin (1890-)
165 Pine Ave., Chicago, Ill.

A tree 40 cm. in diameter and 20 m. tall with slender horizontal branches and ascending limbs in the crown. Bark dark grayish brown, thin, obscurely ridged, a little warty in the lower portion and quite smooth above. Season's branchlets glabrous, angled, tawny-brown with light lenticels. Terminal winter buds 7 mm. long, pyramidal, compressed, acute, reddish brown, puberulous, with about 6 scales.

Leaf blades 11.5-20 cm. long, 8-15.5 cm. wide, thin, dull moderate yellow green above and slightly paler beneath, glabrous on both sides except for small obscure tufts of rusty hairs in the axils of the pale greenish yellow midrib and the slightly falcate lower primary veins, obovate in peripheral outline, symmetrically divided into 4 pairs of lateral lobes increasing upward in length and separated by elliptic sinuses extending halfway or less to the midrib; the lowest lobes acute and entire; the next lobes acute with or without one or two teeth; the next lobes 2.5-3 cm. broad on well developed leaves and ending in 4 teeth; the uppermost lobes the widest, slightly broadening toward the apex and ending in a 4-5-toothed apex and a lower 2-3-toothed lobule; the terminal lobe up to 10.5 cm. wide, trilobate, divided into 2 sometimes broad 2-4-toothed lateral lobes, the apex 3-5-toothed. Base usually obtuse.

Petioles 2.8-5.6 cm. long, terete, glabrous, greenish yellow.

Acorns solitary or paired, 21-26 mm. long; cup bowl-shaped with an incurved rim, 11-14 mm. high, 18-22 mm. wide, covered with dull grayish brown closely appressed commingled imbricated deltoid puberulous scales, thickened near their apex toward the base of the cup, glabrate inside; nut moderate brown, conspicuously mottled with light gray tomentulum, squarish, 17-20 mm. long and wide, nine-twentieths

enclosed in the cup; peduncle up to 12 mm. long, puberulous.

QUERCUS XRIPARIA LAUGHLIN

Arbor 40 cm. diametro et 20 m. alta cum gracilibus aequis ramis et ascendentibus membris in summo. Cortex fuscus cinereo-brunneus, tenuis, obscure fastigatus, in inferiore paulo verrucosus et supra plane laevis. Novi temporis ramuli glabri, angulati, fulvo-brunnei lucidis lenticellis. Extremae hiemales gemmae 7 mm. longae pyramidatae compressae acutae rufo-brunneae puberulentes, circiter 6 squamis.

Folia 11.5-20 cm. longa, 8-15.5 cm. lata, tenuia, supra hebetia galbina et subtus leviter pallidiora, in ambobus lateribus glabra praeter parvas obscuras cristas rubiginosorum pilorum in axillis pallidae galbinae costae mediae et leviter falcatorum inferiorum nervorum lateralium principalium, circumcurrente adumbratione obovata, concinne divisa in 4 lobos lateralis in utroque latere sublime crescentis longitudine et separatos ellipticis sinibus extendentibus dimidio vel minus ad costam mediam; lobi infimi acuti et integri; lobi proximi acuti cum aut sine uno vel duobus dentibus; lobi proximi 2.5-3 cm. lati in bene passis foliis et finientes 4 dentibus; lobi supremi latissimi leviter dilatantes ad apicem et finientes 4-5-dentato apice et humiliore 2-3-dentato lobulo; lobus extremus tenus 10.5 cm. latus trilobatus divisus in 2 interdum latos 2-4-dentatos lateralis lobos, apice 3-5-dentato. Basis plerumque obtusa.

Petioli 2.8-5.6 cm. longi, rotundi, glabri, galbini.

Glandes solae aut compositae, 21-26 mm. longae; cupula poculoformis incurvato margine, 11-14 mm. alta, 18-22 mm. lata, tecta hebetibus cinereo-brunneis arte adpressis mixtis imbricatis triangulis puberulentibus squamis, prope apicem ad cupulae basim densatis, intus glabrata; nux brunnea, insigniter varia pallido cinereo tomentulo, subquadrata, 17-20 mm. longa lataque, novem-vicesimis conclusa in cupula; pedunculus tenus 12 mm. longus, puberulens.

DISCUSSION

This newly discovered hybrid of the Northern Red Oak rubra L. and the Schneck Oak shumardii schneckii Sarg.,which has a diameter of 16 inches, a circumference of 4 feet 2 inches and a remarkable height of 67 feet, is located in Swope Park, Kansas City, Missouri, U.S.A., at the top of the right, east bank of the Blue

River west of Lakeside Drive at about 70th Street. A Bur Oak 13 feet 2 inches in circumference, the biggest Oak in the park, is 52 feet SSE.

The leaves of riparia display characters of both parents. The dull moderate yellow green upper surface of the leaves of rubra is a distinctive character and this character of riparia together with rather shallow sinuses and an obtuse base could cause riparia to be cursorily regarded as rubra in the field. But the obovate shape of the leaves of riparia and their broad upper lobes and elliptic sinuses are like shumardii. The broad terminal lobe of riparia is unlike either parent and is a thing that has developed in this hybrid complex in Swope Park.

The bowl-shaped acorn-cups of riparia covered with commingled puberulous scales are a distinctive character of schneckii. The nut would be short for schneckii and is flat at the apex instead of rounded.

A winter photograph of a typical schneckii about seven hundred feet northwest of riparia appears on page 414 of Volume 7 of PHYTOLOGIA.

I was fortunate in encountering riparia on September 26, 1962 because it showed distinctive characters of both parents and produced a copious crop of acorns. Probably, however, it is a very rare form of hybrids of the two species.

I have strongly suspected for several years past that numerous trees in Swope Park represent a cross between rubra and the type species shumardii because their leaves do not entirely fit the description of either species even after allowing for variations within each species. Shumardii and its variety are at the northern limit of their range in this locality and hybrids between them and rubra may be expected. The acorns of the different species of Oaks are generally so different that the identity of a hybrid is often clinched by the intermediate or aberrant character of its acorns, by a combination of characters of the parents, or by a combination of a distinctive character of a parent with other characters not possessed by the same species. The acorn-cups of the type species shumardii are typically thicker than rubra; but the acorns of both species undergo a wide range of variations, and after studying many specimens I have become convinced that the acorns of the two cannot be reliably distinguished. Identifying hybrid Oaks without the benefit of fructal evidence is very difficult and more study is needed in this case. What is apparently a common form of this hybrid has lustrous olive green leaves much longer than wide with narrow acute toothed lobes separated by

broad open sinuses extending more than halfway to the midrib, falcate lower primary veins, yellow petioles and midribs, a broadly cuneate or obtuse base and insignificant tufts of hairs on the undersurface and deep saucer-shaped acorn-cups with gray scales. These characters are very different from riparia as described above.

The holotype will be deposited in the Royal Botanic Gardens, Kew,England, and an isotype will be deposited in the U.S. National Herbarium, Washington, D.C., by way of the U.S. Forest Service.

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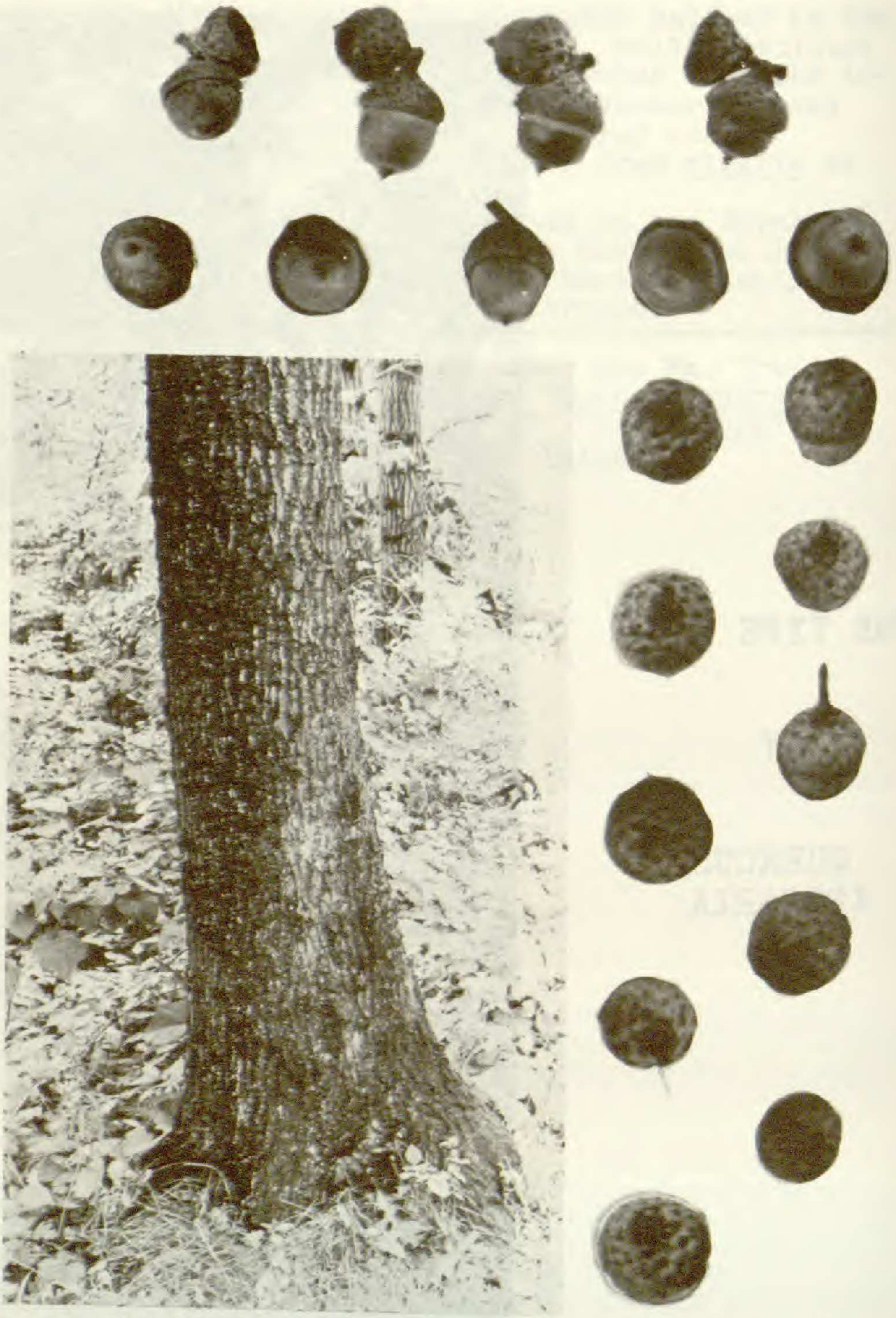
[1]The Gray Herbarium Card Index and Wm. Trelease's "The American Oaks" show "Quercus rubra X shumardii? = Q. joorii Trelease." This "rubra" was the Southern Red Oak, now called falcata.

THE TYPE TREE

OF

QUERCUS
XRIPARIA



THE TYPE TREE OF QUERCUS XRIPARIA
BARK

ACORNS
53% of natural size

FOLIAGE OF QUERCUS XRIPARIA

21% of natural size